

CACTUS AND SUCCULENT JOURNAL

Of the Cactus And Succulent Society
Of America

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Trichocereus macrogonus flowering in the
garden of Mrs. W. L. Otte of Santa
Barbara, California.



CACTUS AND SUCCULENT JOURNAL

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PRESIDENT'S MESSAGE

The enactment of new amendments to the by-laws creating fellowships and commercial memberships as noted in this issue of the JOURNAL marks another advancement for the Society.

Fellowships will be granted to our members who contribute to the advancement of interest in xerophytic plants by their writings, research, field work, or by the formation of study groups or clubs.

A fellow of the Cactus and Succulent Society can write this title after his name just as do fellows of other scientific societies or he may use the abbreviation F. C. S. S. just as a fellow of the Royal Horticultural Society of England uses F. R. H. S.

Fellows must be nominated for the honor by their local clubs and a copy of the resolution of nomination stating the reasons for nomination may be forwarded to the President or Corresponding Secretary, who will present it to the board for action.

The man who has devoted time and energy to the promotion of a local group or the botanist who has given his assistance to such a group is an example of a good prospect for this honor.

As the honor also carries additional dues, the nomination should not be made without the consent of the nominee.

Another new class of membership (the commercial) will include reputable dealers in cactus or other succulents and a list of this class of members will be printed monthly in the JOURNAL. If you know of a dealer in this category, see him and ask him to apply for this class of membership.

We welcome the affiliation of a very live group of students from Texas, *The El Paso Cactus and Rock Club* and urge members in this vicinity to get acquainted with these very likable people.

Our Regional Vice-President for the Eastern States, Mr. William A. Pluemer, announces the birth of a new group—the *Cactus and Succulent Society of New Jersey*, Arthur Garrabrant, President, with headquarters at 964 W. 7th St, Plainfield, N. J. This club will apply for affiliation when organization is completed. The first meeting was held at the hospitable home of our tried and true member, Howard O. Bullard at Hackensack, N. J.

Mr. Pluemer states that plans for the formation of a cactus club in New York City are progressing nicely and New York members are urged to contact him so that they may become charter members of the new group.

Plans for the first annual convention of the Society in 1941, if successful, will include special sessions for fellowship members and consultation meetings for the commercial members.

WM. TAYLOR MARSHALL.

NEW CATALOGUE

Knickerbocker Nursery, Rt. 5, San Diego, Calif. This is Mrs. Bakker's fifth catalogue and the 48 pages include all new illustrations. If you have not received your catalogue, you should ask for a copy.

I need a copy of the Cactus Journal, Vol. I, No. 3, to complete my files. Kindly communicate with Mrs. Harry N. Osgood, 822 Windsor Avenue, Chicago, Ill.

RIO GRANDE VALLEY CACTUS GARDEN
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 1 each above, smallest size, \$8.00 value for \$6.00.
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 All prices f.o.b. Edinburg. No order accepted for less than \$1.00. Money refunded if not satisfied, purchaser to pay express charges one way. Mixed cactus seed 15 cents packet postpaid.

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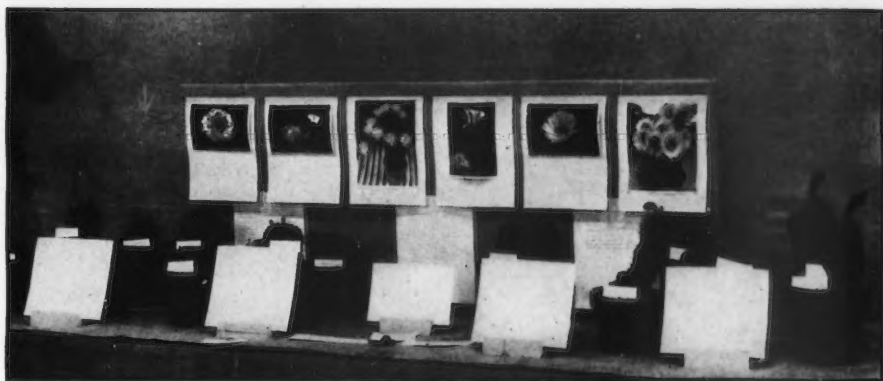


Exhibit arranged and photographed by George Olin. Note *Echinopsis imperialis* Hort. on extreme right.

Educational Exhibit at Southwest Cactus Growers' Show

By GEORGE OLIN

This exhibit represents an effort to establish the relationship of the genera *Echinopsis*, *Lobivia*, and *Trichocereus*. The system of nomenclature as outlined by Backeberg* has been used in all cases. Bear in mind that the *Lobivias* have a more direct relationship to the *Trichocereus* through the yellow flowered species known as *Trichocereus huasba*. This species was recently transferred over to the genus *Lobivia* by Marshall and completes a more direct system than shown here. However, only the one series has been outlined in order to prevent confusion.

GENUS ECHINOPSIS, ZUCC. 1837

Backeberg divides the genus *Echinopsis* into two sections. The first is known as *Euechinopsis* which was set up by Werdermann, and the second is known as *Pseudolobivia* Bckbg. Those plants in the *Euechinopsis* are all long tubed in their flowers and are all night-bloomers while the *Pseudolobivia* section begins to merge with the *Lobivias*. Many of the plants in this section are day-bloomers and a very few are so short in the flower tubes that if they were not white-flowered they would surely be classified as *Lobivias*.

The genus *Echinopsis* abounds in hybrid plants and some very good horticultural varieties have been produced. It is said that *Echinopsis imperialis* which is to be found on this table is a cross between an *Echinopsis* and a *Trichocereus*.

That in itself would establish a reasonable foundation for relationship between the *Echinopsis* and *Trichocereus*.

Echinopsis Eyriesii Zucc.

This is a typical *Echinopsis* in about the center of the genus as far as structure and flowers go. The tube is very long in comparison with either *Trichocereus* or *Lobivia* and the flowers of the closely related species are all either white or a pale orchid color.

The flower has sepals which tend to recurve somewhat but not enough to touch the stem. The stamens are not bunched throughout the flower as in *Lobivia aurea* but are placed with a few around the top diameter of the flower and the greater number of them around the bottom diameter. The style is very long and lies along the bottom of the throat to about the same distance as the stamens.

Echinopsis Bridgesii Salm-Dyck

This species begins to show the relationship to both the *Trichocereus* and the *Echinopsis*. The structure is very much like that of *Echinopsis Huottii* but the flower approaches that of *Trichocereus Schickendantzii*. The tube is somewhat shorter than the average *Echinopsis* of that size, and the sepals recurve more than in the average *Echinopsis*. The stamens are more even-

*Backeberg's names of sections are not in general use but they are interesting from the students' viewpoint.



Echinopsis Bridgesii Salm-Dyck

At approximately nine o'clock in the morning. Approximately one-half natural size.

ly placed around the inside of the throat than others of the *Echinopsis* and the style is differently shaped than the type. The petals are somewhat wider and fleshy in comparison to *Echinopsis Eyriesii*.

In structure, it differs from most of the *Echinopsis*, too. A rather tall plant in comparison to its closely related species, it still throws off-sets somewhat in the nature of *Trichocereus Schickendantzii*.



This picture shows *Echinopsis Bridgesii* remaining open at approximately nine o'clock in the morning. Approximately one-half natural size.

GENUS LOBIVIA, BR. & R. 1922

This genus was but little known until recent years. The work of Britton and Rose brought the genus into being and in the last few years it has become one of the most popular genera in the entire cactus family. The plants are almost all small in size except for a few species which form rather large mounds.

The flowers as well as the plants vary a great deal. Beginning with the very tiny plants in the section *Eulobivia* Bckbg., we find *Lobivia famatimensis* Br. & R. This is one of the smallest plants in the section and forms a good place to start the sequence. *Lobivia famatimensis* has a fairly large flower in comparison with the size of the plant. The flower tube is very short and funnel-form. The flowers of the section *Eulobivia* are all either yellow or red. They are all day-blooming as is the case with all *Lobivias*.

In the second section which is named *Pygmaeolobivia* Bckbg. we find the species *Lobivia neobaageana* Bckbg. This whole section, as the

name would indicate, is made up of very small plants. They are noted for their habit of pulling themselves into the ground when dormant.

The third section of the *Lobivias* is called *Pseudoechinopsis* Bckbg. and it is well named, for it resembles the *Echinopsis* a great deal. The species in this section are day-bloomers, however, and are colored; therefore they are definitely out of the genus *Echinopsis* Zucc.

Lobivia aurea Bckbg.

It is readily apparent that this plant resembles an *Echinopsis*. It was first described by Britton and Rose as an *Echinopsis* in 1922. Years later Backeberg transferred it to the genus *Lobivia* where it still remains.

The flower is yellow and opens out quite flat. The stamens are thickly bunched in the throat of the flower and hide the style. The tube is much shorter than the *Echinopsis* flower and tends to be more funnel-form.

In structure, *Lobivia aurea* is the ideal link



Lobivia aurea (Br. & R.) Bckbg.

This shows a side view of *Lobivia aurea* (Br. & R.) Bckbg. with a partially opened flower. Note that the tube is fairly short and stout and somewhat hairy. This picture is approximately three quarters natural size.

between *Lobivia* and *Echinopsis*. It resembles many of the larger *Lobivias* and yet it is often mistaken for *Echinopsis Silvestrii* when not in bloom. One more distinction separates the plant from *Echinopsis*—it is a day-bloomer.



Lobivia aurea (Br. & R.) Bckbg. The flower here shown is open to its largest size at approximately one o'clock in the afternoon. Approximately natural size.

GENUS TRICHOCEREUS, RICCOBONO 1909

The *Trichocereus* are almost all held in one section by Backeberg. The two species which he holds out are *Trichocereus buascha* Br. & R. (which now has been described as a *Lobivia*) and *Trichocereus fascicularis*.

All the remainder of the genus seem to be night-flowering plants. The flowers have a tendency to be a great deal more fleshy than the *Echinopsis* and also have a fine perfume in most cases, which is lacking in most of the other more closely related genera. The structure of the plants ranges from low clumping plants such as *Trichocereus candicans* to giants like *T. pasacana*

and *T. Werdermannianus*.

Trichocereus Schickendantzii Br. & R.

This species, although very much like one of the *Echinopsis*, is definitely a *Trichocereus*. The short tubed flower, which is also quite hairy, opens out too flat to belong to an *Echinopsis*. From this species it is an easy step to others in the genus which are built in the same clumping fashion and through them into the tall columnar types such as *T. pasacana* and others. Thus the probable relationship between the genus *Lobivia* and the genus *Echinopsis* as well as the relationship between the genus *Echinopsis* and *Trichocereus* has been outlined through the differences in flowers and plant structure.



Trichocereus Schickendantzii, Br. & R. from Argentina. See the columnar type, *T. macrogonus* on pg. 121. The large flowers are pure white and are nocturnal.

LIST OF PRIZE WINNERS Southwest Cactus Growers Cactus Show, June 15-16

In the amateur division, open to all non-commercial dealers, awards granted in section "Cacti, other succulents and associated xerophytes," were:

Best general collection: Mrs. Florence Cariss, Mrs. Hazel Miller, Mrs. Jennie Collins.

Mrs. Cariss was the Sweepstakes winner for the second consecutive year and besides showing hundreds of fine and rare plants her exhibit showed unusual artistry in every little touch. The rock garden was arranged in front of a scenic effect of a stucco wall with paths leading to a Spanish door. Hanging pots of contrasting colorful succulents showed the practical application of these plants.

Pot-grown specimen plant not part of another exhibit: *Aeonium decorum*, Mrs. Florence Cariss; *Echeveria* sp., Mrs. F. S. Gille; *Echeveria Whiteit*, John Akers; *Echeveria* hybrid (*setosa* x *oliverianthus*), Roy Miller.

Educational exhibit over 9 sq. ft.: George Olin, Hazel Miller, Roy Miller.

Garden (not miniature), formal or informal: Florence Cariss, LaNeta Olin, Hazel Miller, Ethel Rush.

Exhibit showing the greatest originality, beauty and use of accessories: Ethel Rush, Florence Cariss, Homer Rush.

CACTUS SECTION

Outstanding general collection: Florence Cariss, Hazel Miller, Wm. Bright.

Single genus, five or more species: *Rhipsalis*, Homer Rush—the 35 different species were arranged in hanging baskets in a lath house and showed exactly how these shade-loving plants should be grown; *Astrophytum*, Homer Rush—all of the 21 species and varieties were shown, including *ornatum* var. *glabrescens* Web., *myriostigma* var. *nuda* R. Mey, *capricorne* var. *major* (Schmoll's, never described), *myriostigma* var. *potosina*, and other variations being held until the puzzle regarding them is solved (who will win—the lumpers or the splitters?); *Ariocarpus*, G. A. Kayser

—included were *A. fissuratus*, *furfuraceus*, *trigonus*, *strobiliformis*, *retusus*, *Lloydii*, *scapharostris*, and *kotschoubeyanus*; *Malacocarpus*, W. A. Abercrombie; *Echinopsis*, F. S. Gille—the 44 species included *E. formosa* among the most interesting; these are all pot grown, flower freely in full sun, and are fed so that repotting is necessary after four or five years; *Mammillaria*, F. Cariss; *Cephalocereus*, F. Cariss.

Crests, variegations or monstrosities: Roy Miller, who showed 50 crests.

Grafts: Roy Miller, W. Abercrombie.

Rarest cactus: *Rhipsalis pulvinigera*, Homer Rush; *Malacocarpus curvispinus*, W. Abercrombie.

Single flowering cactus: *Notocactus Ottonis*, W. Abercrombie; *Rhipsalis pentaptera*, Homer Rush.

Grafted specimen: *Opuntia clavarioides*, F. Cariss; *Mammillaria bidalensis*, Roy Miller; *Malacocarpus tuberosulcatus*, W. Abercrombie.

Individual cactus: *Astrophytum ornatum* var. *Mirbelii*, Homer Rush; *Malacocarpus Grossei*, W. Abercrombie.

SECTION "SUCCULENTS EXCLUSIVE OF CACTI"

Best general collection: Edward Taylor, Florence Cariss, Hazel Miller.

One genus (five or more species): *Echeveria*, John Akers—among the most colorful were *E. lurida* with its violet-gray leaves and *Echeveria Whiteii*; *Lithops*, Edward Taylor; *Hoodia*, John Akers; *Trichocaulon*, John Akers; *Crassula*, Edward Taylor; *Sedum*, Ethel Rush; *Titanopsis*, John Akers; *Adromischus*, Edward Taylor; *Pleiospilos*, Edward Taylor; *Haworthia*, LaNeta Olin—the 60 *Haworthias* were planted in sand and gravel with larger, round, river-bed granite rocks; these rocks were well sunken in the sand and again the impossible proved to be one of the most harmonious arrangements; the exhibit was table height and the gray cardboard, unobtrusive plant markers added to its beauty; *Argyrodema*, Edward Taylor; *Euphorbia*, Edward Taylor.

Best collection of crests, variegations and monstrosities: Roy Miller.

Rarest succulent: *Haworthia Starkiana*, LaNeta Olin; *Crassula Triebneriana*, Edward Taylor; *Testudinaria elephantiipes*, John Akers.

Flowering succulent: *Ceropegia Sandersonii*, Homer Rush; *Sedum Winkleri*, Ethel Rush; *Crassula deltoidea*, Edward Taylor.

Grafted succulent: *Euphorbia fasciculata*, Florence Cariss.

Individual succulent: *Echeveria Derenbergii*, John Akers—a large pot of this colorful succulent; *Aeonium canariense*, Jennie Collins; *Haworthia truncata*, Mamie Abercrombie.

In the novice division Mrs. W. C. Runyon was awarded the prize for the best collection of succulents. This was her first exhibit and showed how plants potted in tin cans can be exhibited by plunging them in peat moss in a box, table height.

In the "special division" the best club exhibit ribbon went to the Exchange, which included an *Echinocereus Davisii* in full flower.

The junior (under 12) display showing a miniature ranchhouse with appropriate buildings, surrounded by an ocotillo fence, was entered by Nadine and Bill Beam. Billy Olin (9 years) got first with his collection of specimen *Cephalocereus*.

Decorative succulent, growing in bowl or jar: Mrs. F. S. Gille.

Decorative arrangement with succulent material: Mamie Abercrombie, Mrs. F. S. Gille, Ethel Rush.

Miniature landscape under 3 sq. ft.: Charles Kreuger.

Hazel Miller won the ribbon for the most colorful exhibit with the outstanding plant of the show—a 20 foot *Yucca Whipplei* in full flower.

The Southwest Cactus Growers showed 20 collected plants all native to California. The public was shown the beauty of these plants and the need for conservation was explained.

Mrs. Ethel Rush deserves special credit for her replica of the famous Multnomah Falls on the Columbia River Highway in Oregon. The background was a solid banking of growing Sedums through which there was a winding path up to a bridge spanning the stream. It was the best set-up of the show, with its 100 named Sedums. Among the most interesting Sedums were the true *S. Adolphii* from the Rose collection; this is a heavier plant, less golden in color, and has more massive white flowers.

The winners of the photographic contest were George Olin, W. Abercrombie, and Edward Taylor. Next year's show should have many more entries.

There was a lack of seedling exhibits this year and the non-competitive showing by R. W. Kelly saved the day with his ten flats of husky youngsters. We are wondering if the Southwest Cactus Growers have found a short cut and have eliminated the seedling stage.

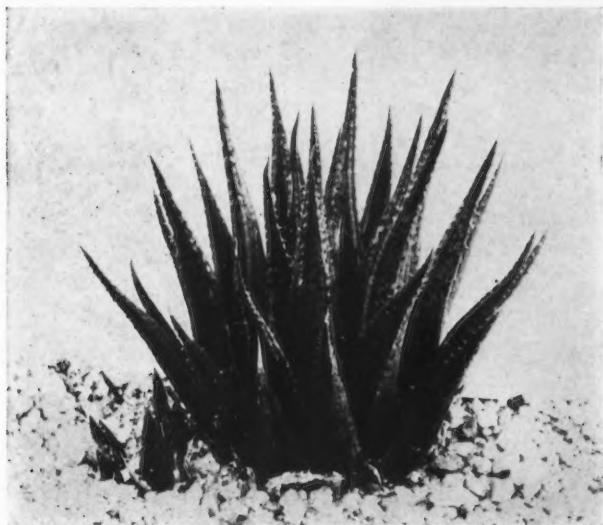
Among other interesting non-competitive exhibits were those of the Long Beach Cactus Club and Mrs. Gertrude Beahm.

There were fewer flowers than usual since the show dates seemed to be between flowering periods. The Epiphyllum Society showed a gorgeous selection of the last flowers of the season with many new creations. Mrs. Helen Steele exhibited fifty different flowers and showed the application to corsages.

The Cactus and Succulent Society of America showed a collection of rarities—any one of which would have been eligible for rarest plant in the show. Howard O. Bullard of N. J. sent collected plants from the Blossfeld Expedition, which were entirely new to us: *Trixanthocereus Blossfeldiana* (Peru), *Haageocereus pseudomelanostele* (Peru), *Oreocereus morantera?* (unknown), *Phlocereus Tweedyanus* (Ecuador), *Binghamia versicolor* (Peru), *Cereus*, unknown species from Peru. Marion P. Berg, Jr., showed her recent rediscovery of *Toumeyia papyracantha*. Dr. Charles Boissevain showed his new species from Colorado—*Coloradoa mesae verdae*. Pres. Marshall showed his complete genus *Strombocactus*, including *Viereckii*, *Saueri* Boed., *macrochele*, *pseudomacrochele* Bckbg., *turbiniiformis* Pfeif., *setosus* new species, and *disciformis*. Other plants exhibited by Pres. Marshall were: *Aztekium Ritteri* (Guatemala), *Copiapoa cinerascens* (Chile), *C. marginata* (Chile), *Acanthocalycium violaceum* (Argentina). R. W. Kelly showed a fine specimen of *Quiabentia chacoensis*. Besides a few human interest exhibits there was a stuffed rattle snake from Charles Evans of Phoenix, Arizona; this snake was so arranged with an electric vibrator that the natural rattles gave onlookers their first preview of the true sound of a rattler ready to strike.

The entire exhibit was a credit to the group and to show managers Mr. and Mrs. Chas. Place, with the only suggestion that small plants be placed upon tables where they may be seen. Many of the educational features were lacking, but pages 123-127 are an excellent example of a fine exhibit. Mr. Olin's exhibit is representative of the serious work of the Group, which meets 52 times each year.

The following 8 pages are the 4th installment of the monograph "Colorado Cacti" by Dr. C. H. Boissevain.



Haworthia variegata L. Bolus, nat. size.

Notes on Haworthias

By J. R. BROWN

Haworthia variegata, L. Bolus in Journ. of Bot. (1929) 137; Poelln. in Repert. Sp. Nov. XXVIII (1930) 102.

Plant stemless, with 20-30 leaves, about 3.5 cm. in diam. Leaves erect, smooth, deep brown with paler markings, to 5.5 cm. long and about 1 cm. broad towards the base, linear-lanceolate and long acuminate, ending in a 2 mm. long white bristle, face of leaf somewhat flat with a slightly raised middle line, back of leaf keeled in the upper part, the margins and keel with minute, aculeate teeth.

Peduncle simple, slender, includ. the raceme about 30 cm. tall; bracts 3-4 mm. long, pedicels 1 mm. long; perianth 11-14 mm. long, white, brown lined, the recurved segments narrow and obtuse, the outer three with brown keels, the inner with green keels.

Locality: Boterkloof in the Riversdale Div. "On limestone hills a few miles inland from Still Bay."

Mrs. Bolus also mentions that Mrs. Ferguson, who discovered this sp., found them growing "in large clumps, almost a foot in diam., and growing rather deep in the soil."

This *Haworthia* belongs in the sect. *Loratae*, Salm. and flowers in So. Calif. through July and August. Part of a raceme is shown, as there are some differences between its flowering outdoors and under glass. As described by Mrs. Bolus the plant was flowering in her garden, the flowers photographed and here shown were developed in a greenhouse and a brief description of them is given. Peduncle, includ. the raceme, 30 cm. and more tall, with 20 or more flowers; the lower bracts 5 mm. long, decreasing upwards, pedicels about the same; perianth 15 mm. long, the tube 10 mm. long, the recurved segments narrow with obtuse tips, 5 mm. long. In the photo the lower flower is withering.

It should also be mentioned that the sterile bracts of the peduncle have an extremely long drawn out tip which has the appearance of a long bristle.

Due to the fact that *Aloe variegata* is well known by its very pronounced markings, the idea has been formed in the minds of many that *Haworthia variegata* would be as striking in appearance; however, the markings of this *Haworthia* are only somewhat paler than the ground



Flowers of *Haworthia variegata* nat. size.

color of the leaf. After so long a time in cultivation under glass the original brown color is only present towards the base of the leaves, the leaves assuming a very dark green color, the markings a paler shade of green, almost a whitish green in the upper part of the leaf. It is a much more distinctly marked plant when grown indoors than when grown in the open due to this change in color.

The markings, which occur on both sides of the leaf, are very variable, having no distinct pattern, often they occur as numerous, smaller, roundish spots giving a dappled appearance to the leaf, sometimes they are in quite large blotches, sometimes in lengthwise areas and so on.

I have extra copies of Nos. 1, 2, 3, of the first volume. If these are rare, you may know someone who would give me a small *Euphorbia* or an unusual *Mesemb.* for them.

DORA INGRAM

17½ Fifty-fourth Place, Playa del Rey, Calif.

AMENDMENTS TO THE BY-LAWS of the Cactus and Succulent Society

July 15, 1940

It has been unanimously voted by the Executive Board that the By-Laws be changed as follows:

Amend Section 1, Article 1, as amended.

Delete Sections 2 and 3 of Article 1.

Substitute two new sections to be known as Article 1, Sections 2 and 3 amended.

Section 1, Article 1. To read: There shall be four classes of membership—Active, Commercial, Life, and Fellowship.

Section 2, Article 1. A Commercial member is a reputable dealer in cactus and/or other succulents whose application has been proposed for this class of membership by a Board member and who has been duly elected by the Board.

A complete listing of all Commercial members giving the business name, address, and type of business, shall be made in each issue of the *JOURNAL* of the Society.

Dues for Commercial members shall be \$3.00 per year in addition to the regular membership dues and this additional fee shall be deposited in the general fund of the Society.

Section 3, Article 1. Fellowship in the Society is a recognition of outstanding contributions to the advancement of interest in Xerophytic plants either by research, writings, field work, or by a substantial contribution of funds for these purposes.

A Fellow of the Cactus and Succulent Society is entitled to use his title or the initials F. C. S. S. after his name to indicate his standing.

A Fellow of the Society shall be elected to this honor, at the Board's discretion, at any regular or called meeting if nominated by a Board member or by an Affiliated Club.

Dues of a Fellow of the Society shall be \$3.00 per year, in addition to the regular membership fees. Such payments shall be deposited in the general fund of the Society.

At its discretion, the Board may remit all Fellowship dues in the case of a Fellowship awarded for research, writing or field work for the advancement of interest in Xerophytic plants.

Fellowship in the Society shall be contingent on membership in the Society and no Fellowship shall be continued after membership in the Society has lapsed.

W. TAYLOR MARSHALL, *President.*

J. SHERMAN DENNY, *Secretary.*

The above amendments were unanimously adopted by the Board on July 28, 1940.

Miss Constance Mulcahy, 411 E. Main St., Batavia, N. Y. would like advice on the best way to heat her cactus room in her garage which is 13 ft. by 9 ft. Her garage is heated by gas.

ANNOUNCING A NEW BOOK

Dr. T. H. Kearney and R. H. Peebles, in collaboration with 22 specialists, have prepared a flora of Arizona. This moderately priced work, which is to be published by the Bureau of Plant Industry, includes approximately 3,500 species.

Limitation of space has prevented the inclusion of descriptions of species, but brief descriptions of families and genera are given, and keys to families, genera, and species are provided.

Those members of the Cactus and Succulent Society desiring a copy on approval should write immediately to R. H. Peebles, Sacaton, Arizona.

A Collecting Trip for Euphorbias

By DR. R. A. DYER

The changes which have come about in the past hundred years or so in undertaking a plant collecting trip in South Africa are almost incredible. The early collector started out in a general direction, for the Karoo, or Namaqualand, or at a later date for the east coast regions, but he had no detailed plans where he was going and only rarely did he know what in particular he would look for. Roads and transportation in most of the best collecting areas were almost unknown. Few could afford the luxury of an old-fashioned ox-cart. One brought back what one met with, and the nature of the plants found was almost entirely a matter of chance. The Euphorbias, for instance, owe more to the perseverance of J. F. Drège than to the journeys of any other collector in the first half of the last century, for he was the first to make permanent records of nineteen of the succulent species and a number of herbs. Yet Drège had no special interest in Euphorbias. His splendid series of species undescribed in this genus was an infinitesimal part of the vast collections he made in every group of the flora during his eight years of exploration in South Africa.

To-day plant collecting has become the hobby of everyone who has the least interest in nature. Good roads and the motor car lead in a few hours, or at most in a few days, to almost any section of the country, and the best collecting fields are well known. One requires a permit from the Provincial Administration before embarking on a collecting trip in any area with the object of enjoying the thrill of looking for specimens of a particular species or group of plants which are desired for one's own garden or rockery. It might be assumed that there remained little to discover, especially about such generally cultivated plants as Euphorbias. But actually the advance in knowledge has only broadened the field, and an opportunity for useful research awaits the enthusiast as generously as in the past. Indeed opportunities have multiplied in kind. One may still, with great good luck, chance on some entirely distinct species; or one may study the varied forms assumed by so many of the succulent species and find unexpectedly that the variations under certain conditions become so marked and so constant as to indicate that a valid separate species had lain hidden all along in the confusion of these forms. Only a beginning has

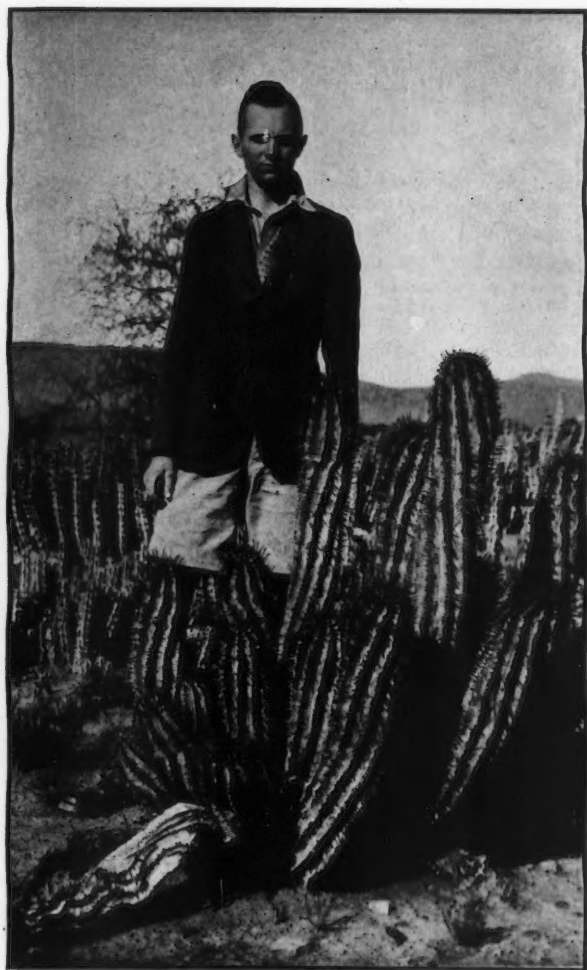
as yet been made to the study of the Euphorbias in the field from this point of view.

Nor are excitements entirely lacking to the explorer of to-day. Roads may look very good on a map, and yet may prove extremely troublesome when one comes to a stretch where repairs have been overlooked or where a storm blows up unexpectedly to complicate matters. Stations for petrol or repairs seem to be many miles away when one requires them most, and the experiences which beset one are more amusing when one looks back upon them afterwards than they seem at the moment. Plant collecting may have changed in many ways and may have become a hobby more than a profession, but it is as fascinating a sport as it ever was and quite as exciting.

When, in August, 1939, I found it possible to absent myself for about three weeks from my Herbarium duties, I decided with the consent of my chief to make a trip from Pretoria through the Free State and Basutoland into the Cape Province and across some of the favorite Euphorbia haunts of the Karoo to Cape Town, for a visit to the collections in the Bolus Herbarium and at the University of Stellenbosch. The objects of the trip were to study as many of the incompletely known species in this rich territory as possible and to add to the number of photographs available for a book on succulent Euphorbias.

Three weeks seemed a generous time to allow for the trip, but the distances are so considerable and the weather in places was so severe that there were almost too many thrills on the road. My companion on the trip was C. P. Oosthuizen of the Division of Botany, and we travelled in one of the Division motor vans. Our adventures began almost from our departure from Pretoria, and it would be quite impossible to relate them all. Rains were incessant on several days, and the roads sometimes ghastly. The morning we drove from Steytleville to Willowmore, for instance, it was not actually raining, but the road was the nearest thing to a skating rink one could imagine. When we slid up a 3-foot bank at a precarious angle we thought the end was near, but by the best bit of luck which came our way during the trip we slid down again on all fours. It was a nerve-shattering drive, however.

Another adventure, with a more amusing side, befell us on the drive from Kendrew to Jansenville. I was very keen to find a particular form

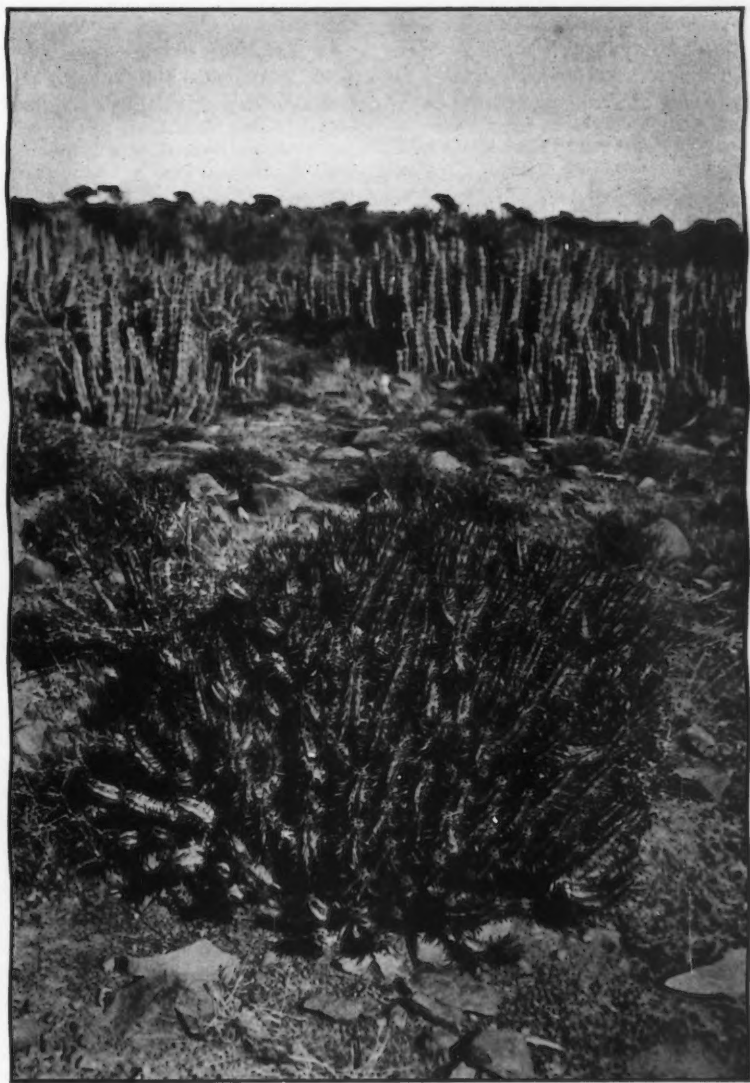


C. P. Oosthuizen poses alongside a tall male plant of *Euphorbia horrida* Boiss., 12 miles north of Jansenville. A large colony of *E. coerulescens* Haw. may be seen in the background.
(Photo: R. A. Dyer.)

of *E. polygona* Haw. in the Noorsveld, which I suspected might prove to be a separate species. It was a Sunday morning when we set out on this long anticipated search. There were many *Euphorbias* along the road. *E. ferox* Marl. was plentiful from Kendrew out. A form resembling *E. heptagona* L. and *E. enopla* Boiss. turned up about 16 miles out, also *E. esculenta* Marl. I spent an hour or so photographing in two places, prepared to restart and—heart failure—the clutch wouldn't declutch and persisted in refusing to do so. There was only one solution: put the car into gear, start on self-starter and go!

And this we did, but we had to pass the *E. polygona* plant *without stopping*, not to mention another species I did not recognize. Then we came to a gate, and Oosthuizen had to open it on the run and do a 100 yards in 10 seconds to catch up again. We could have risked stopping on down slopes, but the idea of being stranded on level ground or on a hill and having to be towed was too great a price to risk, even for *E. polygona*. Eventually we arrived in Jansenville and quite unexpectedly found a garage still open!

An interesting thing about a collecting trip such as this is the help one receives from most



The Noorsveld of Jansenville district. A fine specimen of *Euphorbia enopla* Boiss. in foreground, with endless thickets of *E. coerulescens* Haw. in rear. (Photo: R. A. Dyer.)

unexpected sources. A kind lady in curling pins turned out to inform us of the very best man to go to to learn about the haunts of *E. mammillaris* L. and *E. clandestina* Jacq. A garage owner in Zeekoegat, where we arrived so late that we had to rouse him from sleep, was not only good tempered in spite of our intrusions, but took us into his garden to see an interesting *Euphorbia* and promised to send more on my return home.

Everywhere we found similar kindness. Outside of Ladismith we met two men in the veld, trying to look unconcerned, one with his coat off. We drew up a couple of hundred yards away, and I sauntered up unnoticed to find them busy trying to uproot one of the "vingerpols", species unknown to me. I tried my Afrikaans on the man without a coat with good effect, and he was kind enough to promise plants from his collection.

It is not necessary to enumerate here all the different *Euphorbias* we saw on the trip, since any new information obtained about them has already been incorporated into the notes dealing with each of them, for publication later, but it is worth mentioning the very unexpected manner in which one sometimes comes upon a particular plant. Occasionally good luck comes in the guise of misfortune. On August 14th we retraced our steps somewhat from Jansenville to Graaff Reinet in the Noorsveld, or *Euphorbia coerulescens* country, where plants resembling *E. horrida* Boiss., *E. enopla* Boiss. and *E. heptagona* L. also abound. Without any warning the van stopped. There had been some minor breakdown. While Oosthuizen was attending to repairs, I wandered off to investigate the Bulnoors, or plants resembling *E. horrida*, which extended in all directions, and there among these was a solitary plant greatly resembling *E. cereiformis* L. The latter is a species which has never been localized, and here unexpectedly was a plant, possibly of hybrid origin with *E. horrida* and *E. enopla* as parents, whose appearance suggested that it might be a not too distant cousin. Was this perhaps the region whence the original plant of *E. cereiformis* had itself been collected? One cannot answer, but the thrill of my discovery was none the less vivid on that account. Had it not been for our breakdown, it was a 10,000 to 1

chance we would never have stopped just in that site and found the plant!

Both good and ill luck attended us at Willowmore. I was very anxious to see the typical form of *E. horrida* in the Wittebergen, to compare it with a related plant from Jansenville, which at that time I believed to be a distinct species. We arrived in Willowmore after the nerve-wracking drive already mentioned from Steytlerville. I was hoping to be revived with information about the haunts of *E. horrida*, but the four people who were recommended to us as most able to be of help were all out of town, two on farms miles away and the others in Cape Town. We searched several portions of the Wittebergen without any success. The next morning we made another and even more frantic effort to locate the species, with a correspondingly more depressing result. We were on the point of leaving for Klaarstroom when I decided to call on Mr. Greeff, one of the men who had been absent the preceding day. He was fortunately at home and put us on a good scent at once, so we changed our direction and sped off on a farm road connecting up with Rietbron. To cut a long story short, we reached the farm of a Mr. Stegman, where we found the treasure and others, even more interesting, including a plant related to *E. obesa* Hook. fil., which has proved to be a distinct species.

Our third big thrill came on the 20th. We had



A plant of *Euphorbia stolonifera* Marl. in its natural surroundings, as found on a rocky slope between Ladismith and Barrydale. (Photo: R. A. Dyer.)

left Ladismith and were heading for Swellendam, where we arrived that evening in a medium downpour. Fortunately it did not begin until the middle of the afternoon, and we had clear skies for the earlier part of the day. We had our usual biscuits and chocolate about 2:30, and then the inspiration came to stop and have one of our periodic quick glances around. Almost immediately we came on plants of *E. Susannae* Marl. and *E. mauritanica* L. We decided to search a bit further and presently came on a spiny dwarf species related to *E. atrispina* N. E. Br. and another resembling *E. Mundii* N. E. Br., but best of all I located a plant which proved to be the elusive *E. stolonifera* Marl., which Marloth collected and named many years ago, but which had never been described!

Besides many other enjoyable incidents a local trip with Messrs. Hurling and Niel of Bonnievale cannot escape mention. We had a very profitable picnic.

Yes, there are many adventures and thrills to be met with on a plant collecting trip, and there is still much of botanical interest to be discovered, but not so much by the casual collector as by the keen naturalist. One should study in advance as much as possible about the plants one is likely to meet, and then in the field one can compare and appraise the minor variations of form which are sure to be seen. Where major variations are found it is well worth collecting and growing specimens, to see if the differences remain constant. The study of Euphorbias has reached the stage where specialized work can be undertaken profitably in any one of a dozen or more species, and the National Herbarium at Pretoria is always most happy to receive specimens and photographs of the plants which collectors find of particular interest and always ready to try and assist in their identification.

I have a nice large pot of *Chamaecereus Silvestrii* or Peanut Cactus. Although I have had it three full summers, I have never had a sign of a flower. What is the trouble?

A. W., Cincinnati, Ohio.

EDITOR'S NOTE: Will some one in this locality please advise us how they flower this particular plant?

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THE REVOLT OF A CACTUS FAN

or—I Believe All I Read

I have read with some amusement a diatribe in the recent pages of the JOURNAL on the gentle arts of the cactus fancier entitled "Cacti—Hybrid, Grafted and Monstrous."

It is strange for one to speak with such certain conviction on what can only be one man's opinion. A long time back some wise and tolerant philosopher made an acute observation which he neatly summed up in the phrase "De gustibus non est disputandum." And, whom pray, in this world of relative values, is to challenge your personal likes and dislikes? And because a mule is a hybrid, and worse still is barren, must I forego its superlative virtues and content myself with the horse or the ass which will not serve my purpose?

And what again is a species? And why should it be bedded with the sacred cows? According to the latest findings many fully accepted species are true hybrids to be experimentally produced whose identity is kept only because a fatal lethal is borne within their generative cells. Nature thinks little more of the species than she does of the individual and the fate of perhaps the overwhelming preponderance of species is oblivion, for few are crowned by Pan as progenitors of the future.

And monstrosities are abominations in the sight of God for they are unnatural! Yet a word of caution for those who use this deceptive term. One had best get his semantics straight before he casts the first stone, for who is to say that which nature produces over and over again is unnatural? It would take much to convince me that the graceful convolutions of a fine grafted cristate are not satisfyingly attractive or that the regal blue columns of *Cereus peruvianus monstrosus* are in bad taste when they grace my garden walk!

And what beyond your personal preference is the case to be made against grafting cacti? Who is to say that it is better to wait ten years to see the plant bloom on its own roots than to graft it and enjoy its flowers perchance the same season. Because many feebly rooted cacti grow vigorously on congenial stocks I must cast them aside as bloated specimens because forsooth my neighbor has no luck.

And my choicest Mammillaria is abnormal because it has the vigor and the temerity to produce two lovely heads and now is to be classed with the two-headed calf and the bearded lady. Perhaps poor Nature errs when through her ebullient spirits she causes the earth to pullulate.

In my wanderings at Nature's hem it has seemed to me that plants suffer from too little rather than too much and that when I journey through our deserts during a succession of rainless years and see the starved and meager growth of our friendly desert flora I am seeing the fate that overtakes the Bedouin when he stumbles choking over the sear and tessellated clay where once the coolness of the waterhole invited.

But how different they appear when the rains are abundant and the scarlet of the Echinocereus flames out among the rocks. Yet my "normal" plant is but an average of the good and bad. And am I the taxonomist who sits in the museum's dusty aisle or am I the amateur who grows his plants because he loves to see them smile and repay his affection with the laughter of blossoms?

It may be I wander down a primrose path but I see no virtue in an extremist's view. I grow my plants for pleasure and with as little preconception as I may invest myself.

HARRY JOHNSON, Hynes, California.

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